June 15, 1972
Preliminary Copy
University of Idaho
Soil Conservation Service

Naff Silt Loam 71 Ida 0521

General Site Characteristics

Location -- Benewah County, Idaho, 165 feet west and 1,485 feet south of northeast corner, section 27, T. 45 N., R. 5 W., photo 4V-13; described -- October 6, 1971 by M. A. Fosberg, Elbert Moore, and Art Kreger; topography -- loess sheets, two or more depositions, top, rolling, convex 10 percent slope, 300 feet, toe slope, south facing; elevation -- 2,640 feet; parent material -- loess; climate -- average mean annual precipitation is 20-23 inches, mean summer soil temperature is 63-68°F, soil temperature is 48-50°F, frost free period is 140-160 days; drainage -- well; vegetation or use -- cultivated grain field - wheat stubble; classification -- typic Argixeroll, fine-silty, mixed, mesic.

Pedon Description

Ap 0-8 inches. Dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; weak, fine and medium subangular blocky structure breaking to weak very fine and fine granular structure; soft, friable, slightly sticky and slightly plastic; common fine and medium irregular pores; common fine and medium roots; abrupt smooth boundary.

A11 8-13 inches. Dark grayish brown (10YR 4/2) silt loam, very dark brown (10YR 2/2) moist; moderate fine and medium subangular blocky structure; soft, friable, slightly sticky and slightly plastic; common fine and medium pores; few fine and medium roots; clear smooth boundary.

A3 13-18 inches. Brown (10YR 5/3) silt loam, very dark grayish brown (10YR 3/2.4) moist; weak fine and medium prismatic structure breaking to moderate medium subangular and angular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine and medium tubular and interstitial pores; common fine and medium roots; gradual smooth boundary.

B1t 18-26 inches. Brown (10YR 5.7/3.3) silt loam, brown to dark brown (10YR 4/3) moist; weak medium and fine prismatic structure breaking to moderate medium subangular and angular blocky structure; hard, firm, slightly sticky and slightly plastic; common fine and medium tubular and interstitial pores; common fine and medium roots; common thick vertical and horizontal clay films; few pedo tubulars, few concretions; gradual smooth boundary.

Naff Silt Loam 71 Ida 0521 (continued)

B21t 26-36 inches. Pale brown (10YR 6/3) silty clay loam, brown (7.5YR 4/4) moist; weak fine and medium prismatic structure breaking to strong fine and medium subangular blocky structure; hard, firm, sticky and plastic; many very fine and fine tubular pores; few fine and very fine roots; many very fine and fine tubular pores; few fine and very fine roots; many thick and moderately thick clay films; common fine, medium, and coarse iron and manganese concretions, plentiful bleachings on ped surfaces (silt grains); gradual smooth boundary.

B22t 36-52 inches. Pale brown (10YR 6/3.6) silty clay loam, brown (7.5YR 5/4) moist; strong medium and coarse prismatic structure breaking to strong medium angular and subangular blocky structure; very hard, very firm, sticky and plastic; many very fine, fine, and medium tubular pores; few very fine and fine roots; many thick and moderately thick clay films; common fine, medium, and coarse iron and manganese concretions, abundant bleachings on ped surfaces, fine silt grains, many pedo tubulars; gradual smooth boundary.

B23t 52-63 inches. Light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; strong medium prismatic structure; very hard, very firm, very sticky and very plastic; many fine and very fine pores; few very fine and fine roots; many moderately thick clay films; many pedo tubulars; common fine medium and coarse concretions; plentiful bleaching; gradual smooth boundary.

B24t 63-74 inches. Light yellowish brown (10YR 6/4) silty clay loam, yellowish brown (10YR 5/4) moist; strong medium and coarse angular blocky structure breaking to massive structure; very hard, firm, sticky and plastic; many very fine, fine, and medium tubular pores; few very fine and fine roots; common thin clay bands; many pedo tubulars; many fine and medium concretions, few coarse concretions; roots in pedo tubulars; few bleachings.

Remarks: There are five distinct clay bands in profile:
(1) at 26" - 1 1/2" thick,
(2) at 35" - 1" thick
(3) at 40" - 1" thick
(4) at 45" - 1" thick
(5) at 51" - 1 1/2" thick

Chemical characterization and physical analysis of profile Naff Silt Loam
71 Ida 0521

Date: May 30, 1972

No.	Horizon	Depth in.	pH Paste	pH 1:5	$EC \times 10^3$	Saturation extract me/1000 gms soil							
						Ca	Mg	Na	K	CO_3	HCO_3	Cl	SO_4
1	Ap	0-8	5.60		0.27								
2	A11	8-13	6.25		0.23								
3	A3	13-18	6.25		0.24								
4	B1t	18-26	6.40		0.20								
5	B21t	26-36	6.55		0.18								
6	B22t	36-52	6.70		0.21								
7	B23t	52-63	6.68		0.24								
8	B24t	63-74	6.45		0.25								

Exchangeable ions me/100 gms					C.E.C.	Base	Gyp.	$CaCO_3$		C	O.M.	N		Pw at	Soil:Rx
Ca	Mg	Na	K	H	me/100	Sat.%	%	%	E.S.P.	%	%	%	C:N	sat.	Ratio
1.45	1.98	0.10	1.50	9.41	25.17	34.83			0.40	2.69	4.62	0.209	12.87	57.2	None
1.60	2.71	0.10	1.50	6.80	25.07	46.50			0.40	1.40	2.40	0.149	9.40	58.4	None
1.60	3.13	0.10	1.30	5.23	24.68	53.96			0.41	0.89	1.53	0.099	8.99	52.8	None
1.70	3.75	0.10	1.20	3.66	21.59	64.84			0.46	0.60	1.03	0.071	8.45	50.0	None
1.78	4.58	0.10	0.90	3.66	22.29	66.79			0.45	0.46	0.79	0.052	8.85	50.8	None
2.15	5.83	0.15	0.42	3.40	26.37	71.55			0.57	0.23	0.39	0.035	6.57	52.8	None
2.25	6.04	0.20	0.35	2.88	28.16	69.50			0.71	0.12	0.21	0.020	6.00	53.2	None
2.33	6.25	0.40	0.35	3.66	29.75	71.82			1.34	0.16	0.27	0.021	7.62	50.0	None

Reference for Data: Dr. Maynard A. Fosberg
Department of Agricultural Biochemistry and Soils
University of Idaho
Moscow, Idaho 83843

Analyzed by: Anita Falen

Profile: Naff Silt Loam
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Date: June 14, 1972

No.		Particle size distribution (mm) (percent) VCS 2-1.0	CS 1-0.5	MS 0.5-0.25	FS 0.25-0.05	VFS 0.1-0.05	TS	TSi 0.05-0.002	TC < 0.002	Gravel & Stone, etc. > 2mm	Texture Class
1	0-8	0.05	0.11	0.08	0.85	5.96	7.07	67.18	25.74	None	Silt Loam
2	8-13	0.01	0.04	0.08	0.77	5.93	6.86	67.19	25.94	None	Silt Loam
3	13-18	0.06	0.09	0.06	0.85	5.79	6.88	66.86	26.25	None	Silt Loam
4	18-26	0.03	0.10	0.11	0.91	5.43	6.59	66.82	26.58	None	Silt Loam
5	26-36	0.04	0.08	0.06	0.54	5.17	5.92	66.38	27.69	None	Silty Clay Loam
6	36-52	0.04	0.09	0.07	0.37	4.84	5.42	66.01	28.56	None	Silty Clay Loam
7	52-63	0.02	0.11	0.13	0.48	7.23	7.97	63.08	28.95	None	Silty Clay Loam
8	63-74	0.03	0.14	0.08	0.37	6.01	6.65	62.80	30.54	None	Silty Clay Loam

REMARKS: Finished - 6/7/72
Centrifuge Method
Calgon Added
Carbonates Not Present

No.	CSi	MSi	FSi
1	36.26	27.87	3.04
2	37.46	26.53	3.19
3	36.93	26.83	3.10
4	36.62	26.94	3.24
5	38.48	24.75	3.14
6	37.04	25.78	3.18
7	39.19	20.78	3.10
8	37.30	21.84	3.65

REFERENCE FOR DATA:

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ANALYSIS BY:

Anita L. Falen